UNITED STATES PATENT AND TRADEMARK OFFICE

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21 JAN 2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,376	07/28/2003	Qiang He	14565.0014US01	6537

6537   7590   01/03/2008

ATOCHEM
PATENT DEPARTMENT
LA DEFENSE 10
CEDEX 42
92091 PARIS FRANCE, 111111111
FRANCE

EXAMINER
WILSON, ROBERT W

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
01/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Please check this does not concern Atochem.

	Application No.	Applicant(s)
Office Action Summary	10/629,376	HE ET AL.
	Examiner	Art Unit	
	Robert W. Wilson	2619	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/9/07*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,11,14,17,20 and 23* is/are rejected.

7)☒ Claim(s) *9,10,12,13,15,16,18,19,21,22,24 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/9/07 & 9/19/07*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claim1 is rejected under 35 U.S.C. 102(B) as being anticipated by Hendel (U.S. Patent

No.: 5,920,566)

Referring to claim1, Hendel teaches: A method for forwarding multicast message in a network
communication (The MLDNE per Fig 2 performs the method) comprising:

a. establishing a forwarding match condition at an ingress interface of a network device required
to forward multicast message the forwarding match condition specifying a multicast forwarding
rule for the multicast message, the multicast forwarding rule having a message forwarding
destination specified therein (The multicast router value per Fig 3 is used by 210 per Fig 2 is an
ingress interface in the MLDNE or network device. The ingress interface has a number of
parameters in Fig 3 which are established in a table in the ingress interface to determine if the
message is a unicast or multicast message and also whether the multicast message should be
forwarded. The parameters include MAC destination address as well as layer 3 source address,
layer 3 destination address, inbound port, multicast route, class, and multicast route per Fig 3 per
col. 11 lines 25 to 42)

b. comparing a multicast message which enter the network device through the interface and
needs to be forwarded with the established forwarding condition (The ingress interface examines
compares the layer 3 source address, layer3 destination, source port, destination port, inbound
port and multicast route in order determine if the message is multicast message per col. 11 lines
25 to 42

c. forwarding the multicast message according to the comparing result (If the message is a
multicast message then the message is forwarded per col. 11 lines 25 to 42.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 2-8, 11, 14, 17, 20 & 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hendel (U.S. Patent No.: 5,920,566) in view of Pitcher (U.S. Patent No:

6,370,142) .

Referring to claim 2, Hendel teaches: a method of forwarding multicast message in network communication of claim 1 and Hendel teaches the match forwarding condition when the multicast group address matches.

Hendel does not expressly call for: wherein said forwarding match condition is a multicast message forwarding rule consisting of more than one multicast forwarding rule

Pitcher teaches: wherein said forwarding match condition is a multicast message forwarding rule consisting of more than one multicast forwarding rule (What to do if the multicast group address does not match the forwarding table then the multicast message is forwarded to ports based upon a report destination list associated router which have previously sent multicast packets per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the second multicast rule of Pitcher to the first rule of Hendel in order to build a system which can process unrecognized multicast addresses.

In addition Hendel teaches:

Regarding claim 3, wherein step b comprises: -

b1. determining whether the message entering the interface is a multicast message (210 per Fig 2 is an ingress interface in the MLDNE or network device. The ingress interface examines the MAC destination address as well as layer 3 source address, layer 3 destination address, inbound port, multicast route, and class fields in the packet to their counterpart values shown in Fig 3 for a type 2 in order to determine if the message is a multicast message s per col. 11 lines 25 to 42)

b2. if the message entering through the interface is a multicast message comparing the multicast message with individual multicast message forwarding rules contained the forwarding match

condition (If the message parameters match then the message is determined to be a multicast message then the message or packet is forwarded per col. col. 11 line 1 to col. 12 line 7)

Regarding claim 4, wherein step b2 comprises step of comparing the source address information in the multicast message with source address information in the multicast message forwarding rule (The ingress interface examines the MAC destination address as well as layer 3 source address per Fig 3 and per col. 11 lines 25 to 42)

Regarding claim 5, wherein said step b2 comprises the step of comparing the source address and destination address information in the multicast message with the source address and destination address information in the multicast message forwarding rule (The ingress interface examines the MAC destination address as well as layer 3 source address and layer 3 destination address per Fig 3 and per col. 11 lines 25 to 42)

Regarding claim 6, wherein said step b2 comprises step of comparing the ingress interface information in the multicast message with the ingress information in the multicast message forwarding rule (The ingress interface examines the MAC destination address as well as inbound port per Fig 3 and per col. 11 lines 25 to 42)

Referring to claim 7, the combination of Hendel and Pitcher teach: the method for forwarding multicast message of claim 3 and Hendel teaches: wherein step b2 comprises:

b21. determining whether there is a multicast message forwarding rule established at the interface of the network device comparing information compared by the multicast message with corresponding information in the multicast message forwarding rule (recognizing the multicast message and forwarding per col. 11 lines 25 to 42)

b22. if there is a multicast message forwarding rule established at the interface of the network device comparing information carried by the multicast message with corresponding information in the multicast message forwarding rule (comparing the multicast group address to determine forwarding to per col. 11 lines 25 to 42) ;

Hendel does not expressly call for: b23. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table (What to do if the multicast group address does not match the forwarding table then the multicast message is forwarded to ports based upon a report destination list associated router which have previously sent multicast packets per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add
the second multicast rule of Pitcher to the system of the combination of Hendel and Pitcher in
order to build a system which can process unrecognized multicast addresses.

Referring to claim 8, Hendel and Pitcher teach: the method for forwarding multicast message in
a network communication of claim 2, Hendel teaches wherein said step c comprises:
c1. determining whether there is a multicast message forwarding rule information carried by the
multicast message in the forwarding match condition (recognizing the multicast message and
forwarding per match condition per col. 11 lines 25 to 42)

c2. if there is a multicast message forwarding rule established at the interface of the network
device comparing information carried by the multicast message with corresponding information
in the multicast message forwarding rule (If there is known multicast group destination address
then the packet is forwarded per col. 11 lines 25 to 42)

Hendel does not expressly call for: c3. if not multicast message forwarding rule is established at
the interface of the network device forwarding the multicast message according to a multicast
routing forwarding table

Pitcher teaches: c3. if not multicast message forwarding rule is established at the interface of
the network device forwarding the multicast message according to a multicast routing forwarding
table (If the multicast group message address is not recognized then forwarding the packet based
upon destination list or table per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add
the second multicast rule of Pitcher to the system of Hendel and Pitcher in order to build a
system which can process unrecognized multicast addresses.

Referring to claim 11, the combination of Hendel and Pitcher teach: a method for forwarding
multicast message in a network communication of claim 3 and Hendel teaches: wherein step c
comprises:

c1. determining whether there is a multicast message forwarding rule matching the information
carried by the multicast message in the forwarding match condition (determining if is a match for
a multicast message per Fig 3)

c2. if there is a multicast message forwarding rule established at the interface of the network
device comparing information carried by the multicast message with corresponding information
in the multicast message forwarding rule; (If there is a match then forwarding the packet)

Hendel does not expressly call for: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table

Pitcher teaches: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table (If the multicast group message address is not recognized then forwarding the packet based upon destination list or table per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the second multicast rule of Pitcher to the system of Hendel and Pitcher in order to build a system which can process unrecognized multicast addresses.

Referring to claim 14, the combination of Hendel and Pitcher teach: a method for forwarding multicast message in network communication of claim 4 and Hendel teaches wherein step c comprises:

c1. determining whether there is a multicast message forwarding rule matching the information carried by the multicast message in the forwarding match condition (determining if is a match for a multicast message per Fig 3)

c2. if there is a multicast message forwarding rule established at the interface of the network device comparing information carried by the multicast message with corresponding information in the multicast message forwarding rule; (If there is a match then forwarding the packet)

Hendel does not expressly call for: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table

Pitcher teaches: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table (If the multicast group message address is not recognized then forwarding the packet based upon destination list or table per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the second multicast rule of Pitcher to the system of Hendel and Pitcher in order to build a system which can process unrecognized multicast addresses.

Referring to claim 17, the combination of Hendel and Pitcher teach: a method for forwarding multicast message in network communication in claim 5, and Hendel teaches: wherein step c comprises:

c1. determining whether there is a multicast message forwarding rule matching the information carried by the multicast message in the forwarding match condition (determining if is a match for a multicast message per Fig 3)

c2. if there is a multicast message forwarding rule established at the interface of the network device comparing information carried by the multicast message with corresponding information in the multicast message forwarding rule; (If there is a match then forwarding the packet)

Hendel does not expressly call for: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table

Pitcher teaches: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table (If the multicast group message address is not recognized then forwarding the packet based upon destination list or table per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the second multicast rule of Pitcher to the system of Hendel and Pitcher in order to build a system which can process unrecognized multicast addresses.

Referring to claim 20, the combination of Hendel and Pitcher teach: a method for forwarding multicast message in network communication of claim 6 Hendel teaches: wherein said step c comprises:

c1. determining whether there is a multicast message forwarding rule matching the information carried by the multicast message in the forwarding match condition (determining if is a match for a multicast message per Fig 3)

c2. if there is a multicast message forwarding rule established at the interface of the network device comparing information carried by the multicast message with corresponding information in the multicast message forwarding rule; (If there is a match then forwarding the packet)

Hendel does not expressly call for: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table

Pitcher teaches: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table (If the multicast group message address is not recognized then forwarding the packet based upon destination list or table per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the second multicast rule of Pitcher to the system of Hendel and Pitcher in order to build a system which can process unrecognized multicast addresses.

Referring to claim 23, the combination of Hendel and Pitcher teach: a method for forwarding multicast message in network communication of claim 7 and Hendel teaches wherein step c comprises:

c1. determining whether there is a multicast message forwarding rule matching the information carried by the multicast message in the forwarding match condition (determining if is a match for a multicast message per Fig 3)

c2. if there is a multicast message forwarding rule established at the interface of the network device comparing information carried by the multicast message with corresponding information in the multicast message forwarding rule; (If there is a match then forwarding the packet)

Hendel does not expressly call for: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table

Pitcher teaches: c3. if not multicast message forwarding rule is established at the interface of the network device forwarding the multicast message according to a multicast routing forwarding table (If the multicast group message address is not recognized then forwarding the packet based upon destination list or table per col. 9 lines 51 to 67)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the second multicast rule of Pitcher to the system of Hendel and Pitcher in order to build a system which can process unrecognized multicast addresses.

Claim Objections

5.   Claims 12-13, 15-16, 18-19, 21-22, & 24-25 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Response to Amendment

6.   Applicant's arguments with respect to claims 1-25 have been considered but are moot in

view of the new ground(s) of rejection.

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX-MONTHS from the date of this

final action.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edan Orgad can be reached on 571/272-7884. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert W Wilson
Examiner
Art Unit 2619

RWW
12/26/07

FORM 1449* INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 14565.0014US01	Application Number: 10/629,376
	Applicant: HE et al.	
	Filing Date: July 28, 2003	Group Art Unit: 2643

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

/RW/		McCloqhrie, K. *"IPv4 Multicast Routing MIB."* IETF Request for Comments. October 2000 Retrieved from the Internet: <URL: http://www.ietf.org/rfc/rfc2932.txt> retrieved on 12/12/2003
/RW/		CISCO CORP: *"IOS IP Command Reference, Vol. 3: Multicast"* Retrieved from the Internet <URL: http://www.cisco.com/univercd/cc/td/d/oc/product/software/ios122cgcr/fiprmc_r/mult/Irfmulti.pdf> retrieved on 12/12/2003
/RW/		Estrin D., et al. *Protocol Independent Multicast-Sparse Mode (PIM-SM): Protocol Specification."* IETF Request for Comments. Retrieved from the Internet: <URL:http://www.networksorcery.com/enp/rfc/rfc2362.txt> retrieved on 12/12/2003
/RW/		CISCO CORP. *"End of Sales and Engineering for Cisco IOS Software Releases12.0T."* PRODUCT BULLETIN NO. 943. Retrieved from the Internet: http://www.cisco.com/warp/public/cc/pd/iosw/iore/iomjrel2/prodlit/943_pp.htm retrieved on 12/12/2003

23552
PATENT TRADEMARK OFFICE

EXAMINER /Robert Wilson/	DATE CONSIDERED 12/26/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

FORM 1449* INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 14565.0014US01	Application Number: 10/629376
	Applicant: HE et al.	
	Filing Date: June 28, 2003	Group Art Unit: 2643

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS							
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
/RW/	Ep 1 035 685 A2	03/2000	EPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		

23552
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12/26/2007

EXAMINER	/Robert Wilson/	DATE CONSIDERED	12/26/2007

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*Substitute Disclosure Statement Form (PTO-1449)   Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Notice of References Cited

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Notice of References Cited	10/629,376	HE ET AL.
	Examiner	Art Unit	Page 1 of 1
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U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,370,142	04-2002	Pitcher et al.	370/390
*	B	US-5,920,566	07-1999	Hendel et al.	370/401
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
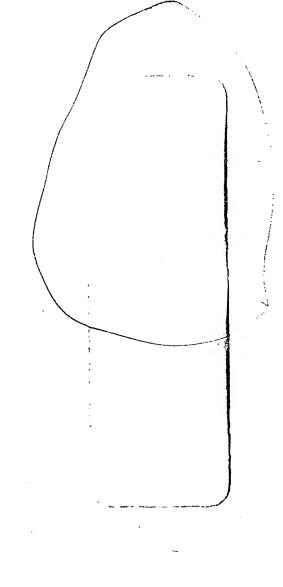Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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